

INTERNATIONAL SEARCH REPORT

International Application No
PCT/JP2004/019803

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 F01N11/00 F02D41/02 F02D41/14

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 F01N F02D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
X	EP 0 475 177 A (NIPPONDENSO CO., LTD) 18 March 1992 (1992-03-18) column 5, lines 5-50; figures 9,16,19 -----	1-4
X	US 5 406 789 A (TAKIZAWA ET AL) 18 April 1995 (1995-04-18) cited in the application column 2, lines 6-14,28-35,51-56 column 4, lines 63-68 column 5, lines 42-44,51-56 column 6, lines 58-63 column 9, lines 44-54,66-68 column 10, lines 1,2,11-21 column 1, lines 37-44; figures 6,12 ----- -/--	1-4

☒ Further documents are listed in the continuation of box C☒ Patent family members are listed in annex

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- *P* document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance, the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance, the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

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Date of the actual completion of the international search

22 June 2005

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
X	US 2003/070420 A1 (UCHIDA TAKAHIRO) 17 April 2003 (2003-04-17) paragraphs '0054! - '0057!, '0068! - '0070!, '0072!, '0083!; figures 2,3 -----	1-4
X	US 5 966 930 A (HATANO ET AL) 19 October 1999 (1999-10-19) abstract; figures 1,17 -----	1-4
X	EP 0 878 611 A (TOYOTA JIDOSHA KABUSHIKI KAISHA) 18 November 1998 (1998-11-18) column 4, lines 45-50 column 7, lines 53-56 -----	1-4

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Information on patent family members

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